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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,920

03/19/2004

Hiroshi Narai

Q80601

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7590

09/15/2006

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EXAMINER

MILLER, ROSE MARY

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/803,920	NARAI ET AL.	
	Examiner	Art Unit	
	Rose M. Miller	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 6-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/617,310.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 3-4, and 6-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims contain a reference to a "layer" within the article. The only occurrence within the specification of the "layer" is in the Brief description of the invention. It is unclear how the "layer" is important or necessary to the disclosed invention. Furthermore, the prior art recognizes a "layer" as an element or component of an article in which there is a clear delineation between the "layer" and the rest of the article. This delineation is not found in the articles being tested by applicant (prior art teaches the elements are steel throughout without any "layers" in the object). Additionally, Applicant's specification fails to indicate how the inherent echo from the "layer" is compensated for or ignored in the testing system. Applicant's drawings merely show the surface echo and the defect echo. There is no indication of the "layer" boundary echo that would be present in any "layer" tested in an ultrasonic system.

It appears the use of the phrase "layer" is due to a translation error. Based upon the references Kiuchi et al. (US 2001/0001172 A1) and Kiuchi et al. (US 6,276,210 B2), which are in the same art as the present application, Applicant's "layer" is merely a "depth" or "distance from surface" found within the test article. Until the questions regarding the use of the "layer" are answered, the claims will be treated as if "layer" were "depth", as found in the prior art.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

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351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3-4, and 6-12 are rejected under 35 U.S.C. 102(e) as being anticipated by **Kiuchi et al. (US 6,276,210) B2**.

Kiuchi et al. discloses a process for testing a continuously variable transmission component (rolling bearing inner ring or outer ring as found in Figure 1) comprising: providing a rolling member (bearing ring 2) comprising a contact surface for contacting with another transmission component, said rolling member (2) being made of steel (see Table 1) and having a layer formed at 0.4 mm or less from the surface thereof (top portion of steel of which the component is composed of to a depth of 2% Da depth which inherently covers the 0.4 mm or less from the surface of the component), measuring, by non-destructive inspection (ultrasonic inspection), the size of a non-metallic inclusions in said layer of said rolling member (2) (see Table 1), and determining the rolling member to be an acceptable continuously variable transmission component when the layer does not contain a non-metallic inclusion having the maximum diameter of 0.115 mm (115 μ m) (see Table 1).

With regards to claim 3, **Kiuchi et al.** discloses testing either an inner ring of a bearing or an outer ring of a bearing (inherently includes the designation of a "power" roller bearing as **Kiuchi et al.** does not limit what type of bearing is tested).

With regards to claim 4, **Kiuchi et al.** discloses a process for testing a continuously variable transmission component (rolling bearing inner ring or outer ring as found in Figure 1) comprising: providing a rolling member (bearing ring 2) comprising a contact surface for contacting with another transmission component, said rolling member (2) being made of steel (see Table 1) and having a layer formed at 0.5 mm or less from the surface thereof (top portion of steel of which the component is composed of to a depth of 2% Da depth which inherently covers the 0.5 mm or less from the surface of the component), measuring, by non-destructive inspection (ultrasonic inspection), the size of a non-metallic inclusions in said layer of said rolling member (2) (see Table 1), and determining the rolling member to be an acceptable continuously variable transmission component when the layer does not contain a non-metallic inclusion having the maximum diameter of 0.1 mm (100 μ m) or more (see Table 1).

With regards to claim 6, **Kiuchi et al.** discloses testing either an inner ring of a bearing or an outer ring of a bearing (inherently includes the designation of a "power" roller bearing as **Kiuchi et al.** does not limit what type of bearing is tested).

With regards to claim 7, **Kiuchi et al.** discloses a process for testing a continuously variable transmission component (rolling bearing inner ring or outer ring as found in Figure 1) comprising: providing a rolling member (bearing ring 2) comprising a contact surface for contacting with another transmission component, said rolling member (2) being made of steel (see Table 1) and having a layer formed at 0.5 mm or less from the surface thereof (top portion of steel of which the component is composed of to a depth of 2% Da depth which inherently covers the 0.5 mm or less from the surface of the component), disposing a desired surface of said rolling member (2) to be measured and an ultrasonic detection probe (3) within an ultrasonic wave transmission medium (see Figure 1 and column 5 lines 16-54), transmitting an ultrasonic wave (see column 5 lines 43-54), having a frequency of 5 MHz – 30 MHz (see column 6 line 11), from said ultrasonic detection probe (3) to said rolling member through said ultrasonic wave transmissive medium (see column 5 lines 43-54), detecting and evaluating a non-metallic inclusions in the area of 0.5 mm or less from said desired surface of said rolling member with an ultrasonic echo reflected by said rolling member (see column 5 lines 16-54, depth distance of 0.5 mm inherent in testing to a depth of 2% Da depth), and disqualifying the rolling member when the thus detected non-metallic inclusion has the maximum diameter of 0.1 mm (100 μ m) or more (see Table 1).

With regards to claims 8 and 9, **Kiuchi et al.** discloses said ultrasonic wave being transmitted into said rolling member (2) according to an oblique defect detect method with an incident angle of 30 degrees (see column 6 lines 7-18).

With regards to claim 10, **Kiuchi et al.** discloses said detecting and evaluating step comprising rotating the rolling member about its rotation axis (see column 5 lines 29-41).

With regards to claim 11, **Kiuchi et al.** discloses said detecting and evaluating step further comprising moving said probe (3) so as to keep a predetermined distance between said rolling member (2) and said probe (3) (see column 5 line 42 – column 6 line 7).

With regards to claim 12, **Kiuchi et al.** discloses said detecting and evaluating step comprising: rotating the rolling member (2) about its rotation axis (see column 5 lines 29-41) and relatively moving said rolling member (2) and said probe (3) along its rotation axis and in a direction substantially perpendicular to said rotation axis so as to keep a predetermined distance between said desired surface of said rolling member (2) to be measured and said probe (3) (see column 5 line 29 – column 6 line 7), whereby all of said desired surface of said rolling member (2) is scanned by said probe (3) (see column 6 lines 5-6).

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Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rose M. Miller whose telephone number is 571-272-2199. The examiner can normally be reached on Monday - Friday, 7:30 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



RMM
5 September 2006



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